

## **ABSTRACT**

The development of telecommunications technology continues to evolve and change according to the desired needs, demanding telecommunications providers to continuously improve its services. PT. Telkom as one of the providers of telecommunications services in Indonesia, also see the development of these technologies as a reference for the improvement of quality of services provided. Next Generation Network to be a pretty interesting issue in the development of telecommunication services at this time. It can not be separated from the shift from circuit switched to packet switched networks, which encourage providers to use a device based on IP (Internet Protocol). As part of the NGN Softswitch as any device that supports these developments, has been used by PT. Telkom since 2004.

Telecommunications network performance can not be separated from the parameter - parameter measurements of performance. To voice no answer seizure ratio, Mean Holding Time seizure and Occupancy. As for packet data exist Jitter, Delay and Packet Loss. One indicator of performance is the ability to handle calls during peak hours. Busy Hour Call Attempts is the parameter handling or call processing capability of a system of switches which are also commonly used in the TDM network. But calculating BHCA for softswitch is still relevant, because the type of service is still the same measured voice.

In this final duty conducted the analysis on the performance of voice softswitch PT. Telkom, which serves four types of connections that Local Exchange, Exchange Trunk, Fix and Other Wireless Access Operators License. In addition to measuring the softswitch voice services, in this thesis also measures the performance of packet data connection pairs ip subnet, as well as Quality of Service of the softswitch voice services.

Key words: Next Generation Network, Softswitch, Quality of Service